



RACE SPECIFICATIONS & HELP WITH CONSTRUCTION OF PINE CARS Who May Race (ANYONE)

1. Ranger Derby cars may be made from Royal Rangers kits sold by [Gospel Publishing House](#) or from other kits that meet the specifications listed under Ranger Derby Rules. The contestant must use the parts provided in the kit for their intended use.
2. **The Royal Rangers GPH Pine car kit may be purchased here,**
<https://myhealthychurch.com/store/searchresults.cfm?Criteria=derby+car+&image.x=0&image.y=0>

Clearance: A car must fit on and roll down the track without interfering with any other car. The bottom of the car when resting on its wheels must be at least 3/8" so it will not rub on the lane strips.

Cars: (except those entered in the outlaw class) must meet the following specifications. Check the race car before you start to make sure that it does not exceed any of the requirements. Maximum Length (including all attachments) 7 1/2"
Maximum Width 2 3/4"

Maximum Height 3"

Maximum Weight 5 1/2 oz. (156 grams)

Weight may be added to lighter cars to bring them to 5.5 ounces, but the weight must be securely attached, be careful when adding weight that it clears Lane guide strips. Contestant may add weights to the car in order to bring the car to the maximum allowed weight of 5.5 ounces. Weights must be an integral part of the car. They may be placed inside the block, mounted as an ornament, or be otherwise permanently attached.

Minimum Under-Car Clearance 3/8"

Minimum Distance Between Wheels 1 3/4"

Race Subgroups:

Subgroup Girl

R-bow/Daisy--- (Preschool, Kindergarten & ages 3-5)

Prims----- (1st. and 2nd grade)

Stars----- (3rd. through 5th.)

Friends/Girls---- (Junior High & High School)

Subgroup Boy

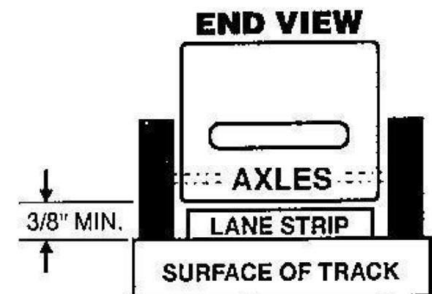
Ranger Kids----- (Kindergarten--1--2)

Discovery----- (Grades--3--4--5)

Adventure----- (Grades--6--7- 8)

Expedition----- (Grades--9---12)

Over 18 Boy or Girl Leader



Race Subgroups continued:

Outlaw: As the name implies, this is a class in which you can use all your ingenuity and imagination: however, you must use the parts in the kit for their designed purpose. There is a few simple rules to follow. All other Royal Rangers Ranger Derby rules apply:

Standard specifications listed in rule 3 are waived; however, the car must fit on the track and run on the track without interfering with other cars.

No car shall weigh more than 32 oz. (908 grams).

No car may exceed 12" in length.

Grand Champion: All first through third place winners in each class, except unlimited class, may compete in the final racing after all other races are completed. This competition will be called The Grand Finals

The addition of decals, driver, steering wheel, car trim, accessories, and painting are permitted as long as they do not cause the car to exceed the maximum dimensions or weight.

Starting devices are prohibited. Cars must be freewheeling.

The Race Program will assign car number. It will be on the bottom of the car.

Wheels and axles may be lubricated with any dry type of lubricant, but excess lubricant must be wiped off, so as not to foul the track. Once a car is checked in, no further lubrication will be allowed.

Wheel surface may be lightly sanded but must not result in substantial removal of mass or in reducing the wheel width from the original kit wheels. Wheel shape may not be altered from the original condition (i.e., rounded, beveled, cupped, etc.).

The car must pass inspection by the Racing Inspector at check-in time. If the car does not pass initially, it may be modified at the repair station as long as it passes by the end of the registration period.

Once a car has been registered, no further work may be done to it.

See: (<http://ncroyalrangers.com/district-derby/>) Web page for more information.

Remember this race is an Outreach Ministry, to build Sportsmanship and make new long-lasting Relationships:

(SEE YOU AT THE FINISH LINE)

CONSTRUCTION SUGGESTION HINTS

NOTE: Rangers strongly urge the participation of both parents/guardians and Rangers in constructing the car. **The Ranger should be allowed to do as much of the construction as possible.**

1. Draw the car design on paper first. You may select a specific design from a magazine, brochure, or newspaper, or come up with your own. Cars may be built to look like real race cars or another creative design. Design judging will be based on how well your car resembles what it is meant to be, as well as how well it is constructed and finished. Use your imagination! Some examples of race cars and other designs are shown below. Outline your design on the wood block as shown. Rough cut the shape using a coping saw, jig saw, band saw, knife, or power sander (adult supervision is strongly recommended for this step!). Using successively finer grades of sandpaper give the car its final shape and then smooth the surface. Before painting, add a couple coats of sanding sealer, let it dry, and sand with very fine sandpaper.

The quality of the car's finish may be determined by the number of paint coats and proper drying time between coats (hint: don't wait until the day before the race to paint your car). You may also use the decals provided with your kit or other commercially available decals to enhance your design. Waxing or coating with a clear, high-gloss overcoat can further improve appearance.

3. The District Ranger track is designed so that the lane strips keep the cars in their proper lanes. Use only the wheels and axles furnished in the kit. The axles may be polished, if desired.

The tread surface of the wheels may be lightly sanded, if desired, but must not be modified to a different shape (e.g., they may not be cut down to be narrower or be beveled). Be careful when sanding wheels as too much friction can melt the plastic. Holes for the screws have been pre-cut in the wood block axle. The distance between the wheels must be at least 1 3/4" and the bottom of the car is at least 3/8" above the ground so it will not rub on the lane strip and slow the car. The lane strip is 1 5/8" wide, 1/4" high.

4. Winning speed cars usually weigh the maximum 5.5 Ounces. Once cars are carved, they usually weigh only 2 to 3 ounces (make sure you include wheels and axles). Weight may be added by drilling a hole in the bottom of the car and attaching commercially purchased or homemade weights with screws or glue (stay within size limits, including ground clearance). No loose or moving weights are allowed. If a car is a little too heavy, drill out some wood from the bottom. If a little too light, add screw(s) to the bottom (countersunk) or other small weights. These fine adjustments can be made on the day of the race at the pit area. Once a car has been officially weighed and accepted, no additional weight may be added.

(SEE YOU AT THE FINISH LINE)